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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,980	09/24/2003	Tibor Farkas	038190/256280	5790

826 7590 03/23/2006

ALSTON & BIRD LLP  
BANK OF AMERICA PLAZA  
101 SOUTH TRYON STREET, SUITE 4000  
CHARLOTTE, NC 28280-4000

EXAMINER
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RUDDOCK, ULA CORINNA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/669,980

Applicant(s)

FARKAS ET AL.

Examiner

Ula C. Ruddock

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 January 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-25 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 6, 2006, has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

3. Claims 1-6, 8, 13, and 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer (US 6,187,411) in view of Fisher (US 6,500,507). Palmer discloses a sandwich panel having substantially reduced damage propagation from impact and an improved tolerance for damage caused by impact from a foreign object (abstract and col 1, ln 11-15). The panel comprises a closed cell polymeric foam core and outer skins comprising layers of woven Kevlar (col 3, ln 6-21 & col 4, ln 43-60). With regard to Applicant's disclosure of a hydrazine fuel tank, fuel system of a vehicle, and hydraulic system of a vehicle, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Palmer discloses the claimed invention except for the teaching that one of the layers of the fabric comprises a honeycomb cross-section.

Fisher (US 6,500,507) discloses flexible, impact or blast-resistant composite material (abstract). Suitable materials for the flexible layer include high strength woven materials such as aramid fabric having one or more layers (col 4, ln 38-44). The flexible layer can also include three-dimensional structures, e.g. honeycomb structures (col 4, ln 64-66). It would have been obvious to one having ordinary skill in the art to use Fisher's teaching of a honeycomb structure as one of the woven outer skins of Palmer, motivated by the desire to create a impact resistant composite that has sufficient resistance to deformation in small areas while maintaining flexibility as a layer of larger areas.

Regarding claims 7, 9, 14, and 15, Palmer and Fisher disclose the claimed invention except for the teaching that the first and second fabric layers are capable of absorbing up to about 30,000 ft-lbs of kinetic energy without rupture and that the insulation is resistant to penetration by a fragment having a kinetic energy greater than about 1700 ft-lbs or greater than about 3500 ft-lbs.

Although Palmer and Fisher do not explicitly teach the claimed kinetic energy absorbance and penetration resistance, it is reasonable to presume that these properties are inherent to the panel of Palmer. Support for said presumption is found in the use of like materials (i.e. outer woven Kevlar layers with honeycomb structure and closed-cell polymeric foam core). The burden is upon Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In addition, the presently claimed property of first and second fabric layers that are capable of absorbing up to about 30,000 ft-lbs of kinetic energy without rupture and a penetration resistance of a fragment having a kinetic energy greater than about 1700 ft-lbs or greater than about 3500 ft-lbs, would obviously have been

present once the Palmer and Fisher product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

***Regarding Applicant's newly added amendment, the woven Kevlar outer skins of Palmer (col 3, In 6-21 & col 4, In 43-60) are considered to be ballistic resistant.***

***Rejection is maintained.***

4. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer (US 6,187,411) and Fisher (US 6,500,507) as applied to claim 1 above, and further in view of Brink et al. (US 3,381,420). Palmer and Fisher disclose the claimed invention except for the teaching that the material further comprises a glass fabric layer and a radiation control film layer.

Brink et al. (US 3,381,420) discloses an insulation material used to insulate tanks, pipes, and automobiles (col 3, In 72-75 and col 4, In 1-2). The structural material contains a flexible film that is used for facing the core, which can be a metallized polyester. The preferred metallizing material is aluminum (col 3, In 24-32). The structural material further contains one or more layers of woven fiberglass cloth to increased the impact resistance of the structural material (col 2, In 25-30). It would have been obvious to have used Brink's metallized polyester film layer and woven fiberglass cloth in the panel of Palmer and Fisher, motivated by the desire to create a panel having increased resistance to impact and damage and having increased strength.

***Rejection is maintained.***

#### ***Response to Arguments***

5. Applicant's arguments filed December 12, 2005, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that Fisher's fabric layer is non-ballistic.

This argument is not persuasive because the Examiner has relied upon the Fischer references for its disclosure of a fabric having a honeycomb structure. The Palmer reference, with its disclosure of woven outer skins of Kevlar fabric and a foam layer sandwiched there between, discloses Applicant's newly added limitation of a ballistic resistant fabric layer. The Examiner is simply replacing one of Palmer's outer Kevlar fabric with Fisher's honeycomb fabric. The claims do not require that both outer layers be ballistic resistant. Applicant also argues that there is no motivation to combine the Palmer and Fischer references. This argument is not persuasive because both references are drawn to analogous subject matter and one having ordinary skill in the art would know that a honeycomb layer in an impact resistant laminate would spread the impact load and reduce blunt trauma-causing deformation. Therefore, motivation would exist to combine the Palmer and Fisher references. As a result, the rejections are maintained.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

UCR *UCR*

*Ula Ruddock*  
**ULA RUDDOCK**  
**PRIMARY EXAMINER**